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ABSTRACT

This guide is designed to help those in the field of Parks and Recreation who wish to develop an environmental learning program in their parks with the cooperation of the local schools. The guide reviews an environmental learning program which was developed in Forest Park, Springfield (Massachusetts), and provides guidelines which could be considered in the establishment of a similar environmental program within a municipal park. The guidelines are designed to facilitate the individual needs of any particular community; they are not step-by-step directives. The guide covers such topics as philosophy and objectives, establishment of a program, curriculum, personnel, funding, legalities, evaluation, and resources. Each topic is dealt with in general terms, followed by a specific example from the Springfield program. (TK)

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A GUIDE TO ESTABLISHING ENVIRONMENTAL EDUCATION PROGRAMS IN MUNICIPAL PARKS

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This guide is being developed for the purpose of helping those in the field of Parks and Recreation, in cooperating with their local school department, to set up environmental learning programs for the children in their communities. The guide is not meant to be a step-by-step directive in setting up a program exactly like that which exists in Springfield. Rather, it gives various ideas which might possibly be considered in the establishment of an environmental learning program, designed to meet the individual needs of any particular community.

A brief description of how the program in Springfield was established is provided for those who would like a more concrete idea in each of the discussed areas.

We obtained our information from the persons involved in setting up the Springfield program. We would like to thank Mr. Clifford Phaneuf, Director of the Environmental Center for Our Schools, Mrs. Lorraine Ide, Science Supervisor for the Springfield Public Schools, and their staffs for their time and cooperation.

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SPRINGFIELD:

Environmental Center for Our Schools (E.C.O.S.) is an interdisciplinary environmental study program. The City of Springfield has a 745 acre park which contains treasures of all types of natural environments. This became the classroom for the Environmental Center. Nine thousand fourth, fifth and sixth graders from the city's public and parochial schools are bussed from their schools to Forest Park for the program.

I. PHILOSOPHY and OBJECTIVES

"Educators and ecologists, alarmed at the rapid rate at which man's environment is deteriorating have begun to realize the necessity of educating children to appreciate and understand the role of man in his natural environment. The concepts in the Science curriculum regarding living things have assumed a great importance - they hold the key for man's survival. The problem facing educators is how best to present these concepts so that children will develop an awareness and concern for the environment in which they live, and a background to help them assume a part in the policy making of the future."

— E.C.O.S. Information Bulletin

The history of cooperation between Parks and Recreation and Schools is now well established and documented. Schools and their programs belong in parks, and, likewise, recreation programs have a place in schools. It is only natural that city parks are opened to display their tremendous wealth not only as play areas, but also as one of the best classrooms a young mind can explore. As Clifford Phaneuf, Director and Project Coordinator of E.C.O.S., describes it,

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"Children who have never had an opportunity to explore areas beyond their own home and school and some who have had the opportunity but never related it to expanding their environmental knowledge, are included in the activity centered program.

Justifying removing children from a school for extended periods of time is not always easy, but given the fact that the margin for error in environmental decisions was rapidly becoming non-existent, the need for environmental literacy was paramount in a school curriculum, our far-sighted School Committee, Park and Recreation Commission, and their administrations were most co-operative."

The objectives which a school system sets for itself will vary depending on the individual needs of the participants, and the size and scope of the environmental program desired.

SPRINGFIELD:

In Springfield fourth, fifth and sixth graders are instructed in three main areas: a) environmental awareness and interdependence of living things b) succession, adaptation and seasonal change and c) survival and man's responsibility toward his environment.

In addition to its prime function of increasing the environmental literacy of the school children, E.C.O.S. is also a training program for the 300 classroom teachers whose students take part in the program. This training enables them to carry on programs in their own school environment.

Area colleges have used the training facilities of E.C.O.S. for their students interested in environmental education. Three colleges have sent students to the Center for their practice teaching. Student groups from as far away as Keene, N. H., have visited the program.

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II. ESTABLISHMENT of a PROGRAM

After the initial idea has been conceived, there are two approaches that could be used for foundations of the program:

1) A resource, such as a park, might be available. The resource could be surveyed and the program curriculum adapted to it;

OR

2) A curriculum could be developed and then a search would have to be conducted to find a resource facility that would meet the greatest portion of its needs.

In any case, the first step is to match a curriculum to a resource that lends itself as a visual and physical workshop in teaching the concepts of that curriculum. All the details to the program should be worked out as indicated under the following areas discussed in this guide. When the program is formalized into a workable format, it should then be presented for school administration and school committee approval.

After approval by the school committee, the program should be presented to the park commission or governing body of the resource facility for their approval.

Public support should be obtained for the program. This can be done by giving presentations and lectures to city or town civic, private, faternal organizations and clubs. Public support is important so parents will understand and accept the program. If good public support and public relations are received, this can be very beneficial when seeking funds or administrative approval of the program.

SPRINGFIELD:

The establishment of the E.C.O.S. program is a unique situation in that it involved the consent and cooperation of four separate organizations: 1) School Department 2) Park Department 3) Forest Park Zoological Society and 4) the South End Community Center.

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The Springfield Public Schools' Science Department developed the curriculum. The Park Department provided the environmental resource facility - Forest Park. The Forest Park Zoological Society provided a headquarters building which it leased from the Park Department and provided free to E.C.O.S. The Zoological Society also provides volunteers who assist in the program when needed. The South End Community Center provided shelters and toilet facilities which they had constructed on park property for their summer program.

Mrs. Lorraine Ide, Science Department Supervisor, surveyed Forest Park with her staff and then adapted her science curriculum to an outdoor, environmental program suited for the Forest Park resource. Mrs. Ide then presented her program to the school administration, the School Committee, the Superintendent of Parks, and the Park Commission for approval.

The E.C.O.S. program is also unique in that an informal relationship between all four organizations was all that was necessary to start the program: no contractural arrangements needed to be drawn up.

When all the organizations had accepted the proposed program, a skeleton staff was trained and a pilot program ran for one year, after which funds were sought for the program.

III. CURRICULUM

The importance of adapting an environmental curriculum to a resource facility was stressed somewhat in the preceeding section. This adaption is the very basis for any environmental program. The program can be as simple as studying succession in the cracks of an abandoned parking lot, or as complex as the entire environment itself.

In any case, school science curriculum today can be, and should be, adaptable to a real and easily accessible environmental teaching resource. It is important to get out of the

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classroom and see and touch and be involved in order to truly understand the concepts of the environment that are so important today.

SPRINGFIELD:

Mrs. Ide, the Science Supervisor, adapted the elementary science curriculum for use in Forest Park, based on a philosophy of active involvement, to allow students to experience environmental concepts.

The curriculum does not begin and end at Forest Park however. A preparatory curriculum is provided for classroom teachers, complete with slides and a handbook to prepare the students for the field trip to the park. Also, a follow-up class with accompanying handbook is provided. Every school ground in Springfield has been surveyed as a separate environmental resource and a follow-up environmental program provided, no matter whether it's located in an urban or suburban type school setting.

The fourth grade program is conducted for three consecutive days. Each group studies a forest, a pond and a field community. They observe the interdependence of living things in each community and see the vital role each member plays in maintaining the ecological balance in that community.

The fifth grade program is a two-day program at the Center with the emphasis on community succession, adaptation and seasonal change.

The sixth grade program is a three-day program at the Center with the emphasis on survival and man's responsibility toward his environment. This program is scheduled for the winter months.

IV. PERSONNEL

The personnel and leaders involved in a program is quite probably the most important factor that will make the

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program exactly what it is or isn't. Extra-special care should be taken in selecting the best individual for the right position. Besides the administrative staff (in the case of Springfield: the Science Supervisor, the Director-Project Coordinator and his secretary), a staff of teachers must be trained to teach the environmental curriculum. It is suggested that the teachers be chosen for their teaching ability and personal philosophy of teaching children, rather than for their environmental knowledge and skills. It is easier to learn an elementary school environmental curriculum than it is to learn to be a good teacher and adjust one's personal philosophy of education to that of the program. Also, teacher aides and volunteers should be chosen on the same basis.

A teacher in the environmental setting can be in charge of the average size class. However, it is recommended that he be assisted by teacher aides, volunteers, or student teachers to keep the teacher/student ratio at approximately 10 to 1. Small group participation in this setting is proven to be most successful and beneficial.

SPRINGFIELD: (see "Flow Chart" - next page)

The Project Coordinator (also as Director and Administrator) supervises the teaching staff. The teachers were chosen on the basis of enthusiasm and teaching ability. They received special training for teaching ecology and the E.C.O.S. curriculum.

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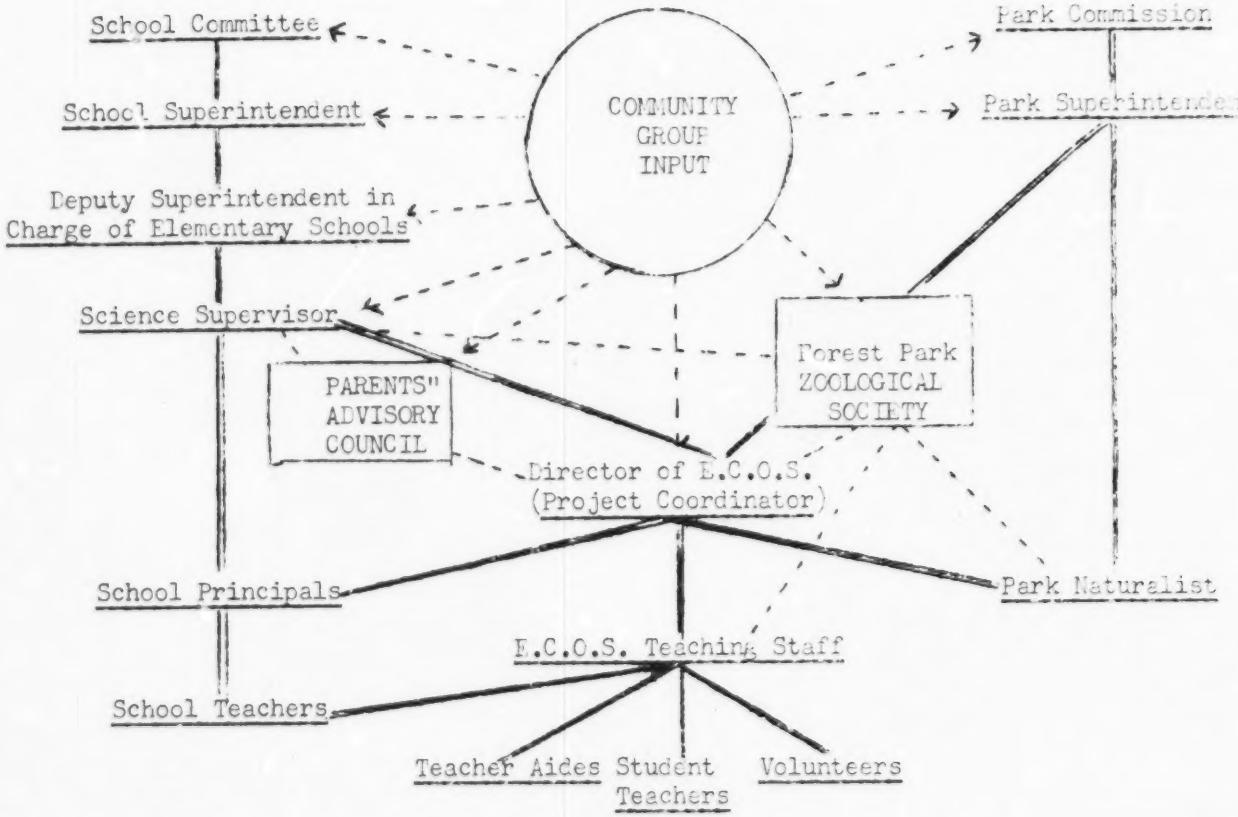
E.C.C.S. "FLOW CHART"



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V. FACILITIES

As far as the actual environmental resource is concerned, the variety is infinite. There are few absolutely essential requirements for a resource facility. It can vary from a few small cracks in an abandoned parking lot to an entire national forest. As memtioned previously, the outdoor site may have to depend on the curriculum (even though it is much easier the other way around).

Toilet facilities are, of course, important and should be available in quantities to handle the expected participation.

Shelters, for rest, shelter, eating and blackboard instruction and films, are a convenience, but may not always be necessary (and the less used, the better). If a program entails leaving the school grounds for extended periods of time, it then is a must to prepare students in advance in dressing for the weather. Environmental programs should be able to operate any day of the school year and in nearly any type of weather.

Ownership and use agreements of the facilities should be clearly understood and contract agreements are suggested for clarification sake.

SPRINGFIELD:

As was mentioned previously in the "Establishment of a Program", E.C.O.S. is run by the School Department on Park Department property and with the use of leased headquarters from the Forest Park Zoological Society and the shelters and toilet facilities provided by the South End Community Center's summer camp. There is such a close working relationship between all parties involved that no contractural agreements were entered into.

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VI. FUNDING

"Money is where you find it." That is the principle that should be followed here. All too often we will hear someone cry, "Where will the money come from?" Quite often, the money is there; we just haven't looked hard enough. The type and amount of funding, of course, will depend on the individual program. There are three main areas in which one might head to look for funds: a) the General Fund of a community b) Federal or State funding, or c) private Foundation grants.

SPRINGFIELD:

In Springfield, the E.C.O.S. program began as a pilot program on scraped-up funds from the School Department's budget. The following year it received complete Federal funding under Title III of the Elementary and Secondary Education Act. The first year was entirely funded by the Federal government. The second year, the City of Springfield assumed 30% of the burden and the third year, the local share increased to 40%. Eventually, the program will be entirely funded by the municipality of Springfield at a yearly cost (presently) of approximately $130,000 for 9,000 students, approximately $14.00 per student.

VII. TRANSPORTATION and LUNCHES

Transportation and lunches will also depend on each locale, its set up, and its program needs. Indeed, some programs may not require any special arrangements for transportation and lunches.

SPRINGFIELD:

In Springfield 9,000 students are bussed by a private company, hired on a contractural basis, from their schools, to the park and back at a cost of $8,800 yearly (approximately 40¢ per child/per day).

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Lunches present no problem as students who normally bring their lunch to school do the same and those who make use of the school hot lunch system are provided with box lunches which are made up by the people who normally serve them every day.

VIII. DAILY OPERATION

The daily operation will depend on a particular school's program. The children do seem to benefit more if they are removed from the classroom entirely for a certain period of time to give them more of a feeling for the out of doors through complete immersion.

SPRINGFIELD:

8:00 A.M.	Environmental teacher staff meets at E.C.O.S. Headquarters to plan and coordinate day's activities.
9:00 A.M.	Children bussed from schools to park.
9:15 A.M.	Children arrive at park, are broken down into smaller groups and are assigned an instructor for the day.
Noon	Lunch outdoors or in shelters
1:30 P.M.	Children board buses for trip back to schools. Environmental teacher staff returns to E.C.O.S. Headquarters to tend to chores, conduct evaluations, plan next day's activities, etc.
1:45 P.M.	Children arrive back at schools.

IX. SCHEDULING

Scheduling of classes to attend the program should be done by the Project Coordinator in order to insure the continuity of his program. The program should be designed to run any day that schools are in session. Adverse weather conditions provide

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excellent environmental educational opportunities, quite often exceeding those opportunities present on a fair weather day.

SPRINGFIELD:

The schedule is made by the Project Coordinator at his discretion and is designed to operate any day the schools are in session.

Fourth graders come for three days in the Spring or Fall, fifth graders come for two days in late Fall and early Winter, and sixth graders come for three days during the Winter. As new curriculum is being developed, ideas such as overnight camping trips to the mountains and the Cape Cod National Sea Shore Environmental Program are in the planning stages.

X. LEGALITIES

Liability against injury of the participants is probably the major concern in the realm of legalities. This should be covered either by the municipality taking out insurance or the individual being at least offered insurance through a school designated insurance agency.

SPRINGFIELD:

In Springfield, each student is offered insurance through the school plan.

XI. MAINTAINANCE

Many different agreements can be made regarding maintainance of facilities. Basically, if the program staff agrees to pick up after itself, there should be no complaint from the facility owners. Any major maintainance can be referred to the Park Department maintainance crews.

SPRINGFIELD:

The above is the case in Springfield.

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XII. EVALUATIONS

The curriculum and entire program should always be under constant "running" evaluations. Curriculum should be updated as soon as some discrepancy is realized. Only in this way might those running the program know if they are meeting the objectives which they have set for themselves.

SPRINGFIELD:

In Springfield, the E.C.O.S. program has been under constant evaluation since it began. Students, teachers, and parents have all been asked to give their opinion on the success of the program. The administration hired a private firm to evaluate the entire program in very detailed fashion. All indications are that the program has been 100% successful up to this point.

> "The IMPACT of the program as shown by these results is dramatic and is indicative of the fact that perhaps these students will treat their new-found environmental literacy as a continuum and further increase their knowledge and involvement by building on their E.C.O.S. experience.....
>
> ...These figures indicate that obvious change has taken place in terms of the students' awareness, perspectives, and values relative to their natural environment.
>
> It seems obvious that a high degree of this change can be directly attributed to the students' E.C.O.S. experience. They have had no parallel experience in the regular school program that would account for this amount of change."
>
> — Robert Reid, Evaluator
> Psychometrics, Inc.

"E.C.O.S. is a small beginning, but we're finding that students' exposure to the program nutures their quest for environmental knowledge. If this spark can only be expanded,

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then when it becomes their turn to make decisions regarding our environment, it will be a knowledgable decision."

— Clifford Phaneuf

XIII. RESOURCES

The following is a list of resources which one might find helpful in setting up an environmental education program.

Curriculum:

- E.C.O.S., Springfield School Department, Springfield, Massachusetts ask for the following:
  - Information Bulletin
  - "Why ECOS?"
  - Interim Evaluations
  - Terminal Teacher Performance Objectives
  - Mini-Curriculum Guide
- Camp Union, Greenfield, New Hampshire
- Mass. Audubon Society, Lincoln, Mass.
- State Department of Education

Funding:

- National Environmental Education Act
- Private Foundations
- Municipal Budget

Specialists:

- Walter Stone, Director of Camp Union, Greenfield, N.H.
- Lorraine Ide, Science Supervisor, School Department, Springfield, Massachusetts
- Clifford Phaneuf, Director of E.C.O.S., Springfield, Massachusetts